

IN THE CLAIMS

Amend the claims as follows.

54. (Amended) A micro-organism-specific nucleic acid sequence comprising a 16S-23S rRNA spacer sequence selected from the group consisting of: SEQ ID NO: 101, SEQ ID NO: 102, SEQ ID NO: 103, SEQ ID NO: 104, SEQ ID NO: 105, SEQ ID NO: 106, SEQ ID NO: 107, SEQ ID NO: 112, SEQ ID NO: 113, SEQ ID NO: 114, SEQ ID NO: 115, SEQ ID NO: 116, SEQ ID NO: 119, SEQ ID NO: 120, SEQ ID NO: 121, SEQ ID NO: 122, SEQ ID NO: 123, SEQ ID NO: 126, SEQ ID NO: 127, SEQ ID NO: 128, SEQ ID NO: 129, SEQ ID NO: 130, SEQ ID NO: 131, SEQ ID NO: 132, SEQ ID NO: 133, SEQ ID NO: 134, SEQ ID NO: 135, SEQ ID NO: 136, SEQ ID NO: 137, SEQ ID NO: 138, SEQ ID NO: 139, SEQ ID NO: 140, SEQ ID NO: 141, SEQ ID NO: 142, SEQ ID NO: 143, SEQ ID NO: 144, SEQ ID NO: 145, SEQ ID NO: 146, SEQ ID NO: 147, SEQ ID NO: 148, SEQ ID NO: 149, SEQ ID NO: 150, SEQ ID NO: 151, SEQ ID NO: 152, SEQ ID NO: 153, SEQ ID NO: 154, SEQ ID NO: 157, SEQ ID NO: 158, SEQ ID NO: 159, SEQ ID NO: 160, SEQ ID NO: 161, SEQ ID NO: 162, SEQ ID NO: 164, SEQ ID NO: 165, SEQ ID NO: 166, SEQ ID NO: 167, SEQ ID NO: 168, SEQ ID NO: 169, SEQ ID NO: 171, SEQ ID NO: 172, SEQ ID NO: 173, SEQ ID NO: 174, SEQ ID NO: 195, SEQ ID NO: 196, SEQ ID NO: 197, SEQ ID NO: 213, SEQ ID NO: 214, SEQ ID NO: 111, SEQ ID NO: 124, SEQ ID NO: 125, SEQ ID NO: 163, SEQ ID NO: 170, SEQ ID NO: 215,

a sequence complementary to any of the above-recited sequences; and

a sequence recited above which contains a U in place of T.

B3
cont.

55. (Amended) A nucleic acid sequence according to claim 54, wherein said nucleic acid sequence is a respiratory tract microorganism-specific nucleic acid sequence comprising a 16S-23S rRNA spacer sequence selected from the group consisting of: SEQ ID NO: 101, SEQ ID NO: 102, SEQ ID NO: 103, SEQ ID NO: 104, SEQ ID NO: 105, SEQ ID NO: 106, SEQ ID NO: 157, SEQ ID NO: 158, SEQ ID NO: 159, SEQ ID NO: 160, SEQ ID NO: 161, SEQ ID NO: 162, SEQ ID NO: 164, SEQ ID NO: 165, SEQ ID NO: 166, SEQ ID NO: 167, SEQ ID NO: 168, SEQ ID NO: 169, SEQ ID NO: 171, SEQ ID NO: 172, SEQ ID NO: 173, SEQ ID NO: 174, SEQ ID NO: 112, SEQ ID NO: 113, SEQ ID NO: 114, SEQ ID NO: 115, SEQ ID NO: 139, SEQ ID NO: 140, SEQ ID NO: 141, SEQ ID NO: 142, SEQ ID NO: 143, SEQ ID NO: 144, SEQ ID NO: 126, SEQ ID NO: 127, SEQ ID NO: 128, SEQ ID NO: 129, SEQ ID NO: 111, SEQ ID NO: 124, SEQ ID NO: 125, SEQ ID NO: 163, SEQ ID NO: 170 and SEQ ID NO: 130.

B3

86. (Amended) Method according to claim 82 wherein said detecting comprises hybridizing a taxon-specific probe to said nucleic acid, said probe specifically hybridizing with said nucleic acid sequence.

Add the following new claims:

B4

--89. (new) A nucleic acid sequence according to claim 54, wherein said nucleic acid sequence is a *Pseudomonas aeruginosa*-specific sequence comprising a 16S-23S rRNA spacer sequence of SEQ ID NO: 111.

90. (new) A nucleic acid sequence according to claim 54, wherein said nucleic acid sequence is a *Mycoplasma*-specific sequence comprising a 16S-23S rRNA spacer sequence selected from SEQ ID NO: 124 or SEQ ID NO: 125.

91. (new) A nucleic acid sequence according to claim 54, wherein said nucleic acid sequence is a *Mycobacterium xenopi*-specific sequence comprising a 16S-23S rRNA spacer sequence of SEQ ID NO: 163.

92. (new) A nucleic acid sequence according to claim 54, wherein said nucleic acid sequence is a *Mycobacterium celatum*-specific sequence comprising a 16S-23S rRNA spacer sequence of SEQ ID NO: 170.

B4
CDU
93. (new) Method for the detection and identification of at least one micro-organism, or for the simultaneous detection of several micro-organisms in a respiratory tract sample, comprising the steps of:

(i) optionally releasing, isolating and/or concentrating the polynucleic acids from a micro-organism to be detected in the sample;

(ii) optionally amplifying the 16S-23S rRNA spacer region, or a part thereof, from a micro-organism to be detected, with at least one primer pair;

(iii) detecting the presence of a respiratory tract microorganism-specific nucleic acid sequence comprising a 16S-23S rRNA spacer sequence selected from the group consisting of: SEQ ID NO: 101, SEQ ID NO: 102, SEQ ID NO: 103, SEQ ID NO: 104, SEQ ID NO: 105, SEQ ID NO: 106, SEQ ID NO: 157, SEQ ID NO: 158, SEQ ID NO: 159, SEQ ID NO: 160, SEQ ID NO: 161, SEQ ID NO: 162, SEQ ID NO: 164, SEQ ID NO: 165, SEQ ID NO: 166, SEQ ID NO: 167, SEQ ID NO: 168, SEQ ID NO: 169, SEQ ID NO: 171, SEQ ID NO: 172, SEQ ID NO: 173, SEQ ID NO: 174, SEQ ID NO: 112, SEQ ID NO: 113, SEQ ID NO: 114, SEQ ID NO: 115, SEQ ID NO: 139, SEQ ID NO: 140, SEQ ID NO: 141, SEQ ID NO: 142, SEQ ID NO: 143, SEQ ID NO: 144, SEQ ID NO: 126, SEQ ID NO: 127, SEQ ID NO: 128, SEQ ID NO: 129 and SEQ ID NO: 130;

(iv) identifying the micro-organism present in said sample from the nucleic acid detected in said sample.

94. (new) A method of claim 93 wherein said nucleic acid sequence is a *Mycobacterium kansasii*-specific sequence comprising a 16S-23S rRNA spacer sequence selected from the group consisting of: SEQ ID NO: 101, SEQ ID NO: 167, SEQ ID NO: 168 and SEQ ID NO: 169.

B4
cont.
95. (new) A method of claim 93 wherein said nucleic acid sequence is a *Mycobacterium chelonae*-specific sequence comprising a 16S-23S rRNA spacer sequence selected from the group consisting of: SEQ ID NO: 102, SEQ ID NO: 103 and SEQ ID NO: 174.

96. (new) A method of claim 93 wherein said nucleic acid sequence is a *Mycobacterium gordonae*-specific sequence comprising a 16S-23S rRNA spacer sequence selected from the group consisting of: SEQ ID NO: 104, SEQ ID NO: 105 and SEQ ID NO: 106.

97. (new) A method of claim 93 wherein said nucleic acid sequence is a *Mycobacterium ulcerans* or a *Mycobacterium marinum*-specific sequence comprising the 16S-23S rRNA spacer sequence of SEQ ID NO: 157.

98. (new) A method of claim 93 wherein said nucleic acid sequence is a *Mycobacterium genavense*-specific sequence comprising a 16S-23S rRNA spacer sequence selected from the group consisting of: SEQ ID NO: 158, SEQ ID NO: 159, SEQ ID NO: 160, SEQ ID NO: 161 and SEQ ID NO: 162.

99. (new) A method of claim 93 wherein said nucleic acid sequence is a *Mycobacterium simiae*-specific sequence comprising a 16S-23S rRNA spacer sequence selected from the group consisting of: SEQ ID NO: 164 and SEQ ID NO: 165.

100. (new) A method of claim 93 wherein said nucleic acid sequence is a *Mycobacterium fortuitum*-specific sequence comprising the 16S-23S rRNA spacer sequence of SEQ ID NO: 166.

B4
CDH
101. (new) A method of claim 93 wherein said nucleic acid sequence is a *Mycobacterium haemophilum*-specific sequence comprising a 16S-23S rRNA spacer sequence selected from the group consisting of: SEQ ID NO: 171, SEQ ID NO: 172 and SEQ ID NO: 173.

102. (new) A method of claim 93 wherein said nucleic acid sequence is a *Mycobacterium malmoeense*-specific sequence comprising the 16S-23S rRNA spacer sequence of SEQ ID NO: 107.

103. (new) A method of claim 93 wherein said nucleic acid sequence is a *Pseudomonas*-specific sequence comprising a 16S-23S rRNA spacer sequence selected from the group consisting of: SEQ ID NO: 112, SEQ ID NO: 113, SEQ ID NO: 114 and SEQ ID NO: 115.

104. (new) A method of claim 93 wherein said nucleic acid sequence is a *Staphylococcus aureus*-specific sequence comprising a 16S-23S rRNA spacer sequence selected from the group consisting of: SEQ ID NO: 139, SEQ ID NO: 140, SEQ ID NO: 141, SEQ ID NO: 142 and SEQ ID NO: 143.

105. (new) A method of claim 93 wherein said nucleic acid sequence is a *Staphylococcus epidermis*-specific sequence comprising the 16S-23S rRNA spacer sequence of SEQ ID NO: 144.

106. (new) A method of claim 93 wherein said nucleic acid sequence is an *Acinetobacter*-specific sequence comprising a 16S-23S rRNA spacer sequence selected from the group consisting of: SEQ ID NO: 126, SEQ ID NO: 127, SEQ ID NO: 128, SEQ ID NO: 129 and SEQ ID NO: 130.

BY
cont.
107. (new) A method of claim 93 wherein said nucleic acid sequence is an *Acinetobacter baumannii*-specific sequence comprising the 16S-23S rRNA spacer sequence of SEQ ID NO: 126.

108. (new) A method of claim 93 wherein said nucleic acid sequence is a *Streptococcus*-specific sequence comprising a 16S-23S rRNA spacer sequence selected from the group consisting of: SEQ ID NO: 145, SEQ ID NO: 146, SEQ ID NO: 147, SEQ ID NO: 148, SEQ ID NO: 149, SEQ ID NO: 150, SEQ ID NO: 151, SEQ ID NO: 152 and SEQ ID NO: 153.

109. (new) A method of claim 93 wherein said nucleic acid sequence is a *Pseudomonas aeruginosa*-specific sequence comprising a 16S-23S rRNA spacer sequence of SEQ ID NO: 111.

110. (new) A method of claim 93 wherein said nucleic acid sequence is a *Mycoplasma*-specific sequence comprising a 16S-23S rRNA spacer sequence selected from SEQ ID NO: 124 or SEQ ID NO: 125.